

IN THE CLAIMS:

1. (Currently Amended) A method for forming MOS transistor gate dielectrics, comprising:

providing a semiconductor substrate;

forming a first dielectric layer on said semiconductor substrate;

performing a first plasma nitridation of said first dielectric layer;

removing said first dielectric from a region of said substrate;

forming a second dielectric layer on said semiconductor substrate in said region from which said first dielectric layer was removed; and

simultaneously performing a second plasma nitridation of said second dielectric layer and said first dielectric layer, said first dielectric layer having a nitrogen concentration of 5 to 20 atomic percent following said second plasma nitridation.

2. (Original) The method of claim 1 wherein said first dielectric layer comprises silicon oxide.

3. (Original) The method of claim 2 wherein said second dielectric layer comprises silicon oxide.

4. (Currently Amended) The method of claim 1 wherein said second dielectric layer has

nitridation.

Claim 5 (Canceled)

6. (Currently Amended) A method for forming integrated circuit MOS transistors, comprising:

providing a semiconductor substrate;

forming a first silicon oxide layer;

performing a plasma nitridation process on said first silicon oxide layer forming a first plasma nitrided oxide layer;

removing said first plasma nitrided oxide layer from regions of said substrate; and

forming a second plasma nitrided oxide layer on said semiconductor substrate in said regions from which said first plasma nitrided oxide layer was removed, said first dielectric layer having a nitrogen concentration of 5 to 20 atomic percent after forming said second plasma nitridation.

7. (Original) The method of claim 6 wherein said forming said second plasma nitrided oxide layer comprises:

forming a second silicon oxide layer in said regions from which said first plasma nitrided oxide layer was removed; and

performing a second plasma nitridation process on said second oxide layer and said first

plasma nitrided oxide layer.

Claim 8 (Canceled)

9. (Withdrawn) Integrated circuit MOS transistors, comprising:

a semiconductor substrate;

a first plasma nitrided oxide layer formed on a first region of said semiconductor substrate;

a second plasma nitrided oxide layer formed on a second region of said semiconductor substrate wherein said second plasma nitrided oxide layer is formed using dual nitridation processes;

a first transistor gate formed on said first plasma nitrided oxide layer; and

a second transistor gate formed on said second plasma nitrided oxide layer.

10. (Withdrawn) The integrated circuit MOS transistors of claim 9 where said first plasma nitrided oxide layer comprises 5 to 20 atomic percent of nitrogen.

11. (Withdrawn) The integrated circuit MOS transistors of claim 10 where said second plasma nitrided oxide layer comprises 5 to 15 atomic percent of nitrogen.